PACIFIC FISHERMAN

SEPTEMBER 1964

SALMON CENTENNIAL NUMBER

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ASTORIA, OREGON

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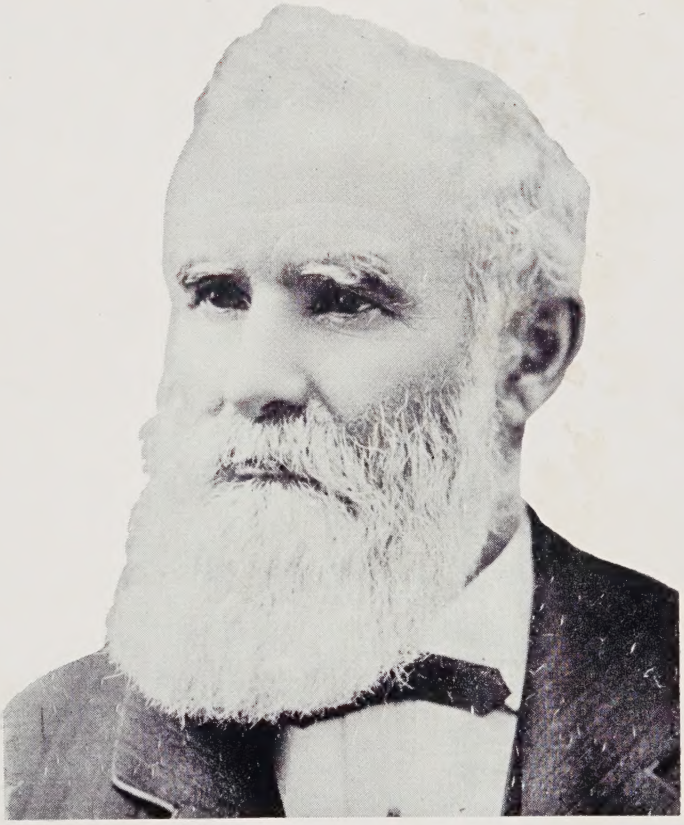
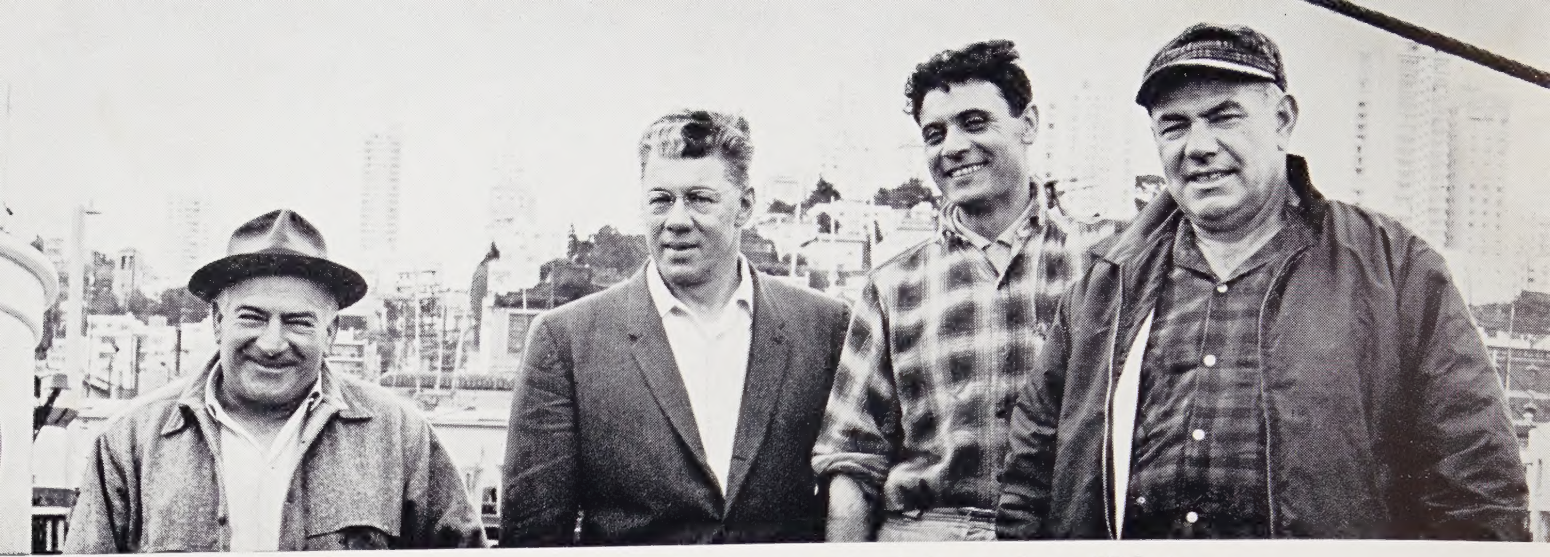
See Page 18

G. W. Hume



Wm. Hume

1864 - A Century of Salmon Canning - 1964



From left, Capts. Tony Faraldo, Fred Pompeo, Joseph Amato, Cosmo Violante.

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Our Sixty-Second Year— September, 1964
Vol. 62 No. 10

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Fishing Vessel Construction Receives $50. Million Subsidy

The Fishing Vessel Construction subsidy bill was sent to the President for signature late in August, and will probably be signed into law during this session of Congress. The law provides a subsidy of up to 50% for certain U. S. fishing vessels, the exact amount of the subsidy being decided in each case as an amount equal to the difference between the cost of constructing the vessel in a shipyard in the United States, and the cost of building a similar vessel in a foreign shipbuilding center.

The new act extends Public Law 86-516 until June 30, 1969, raises the maximum subsidy from 33.3% of the vessel's cost to 50%, and extends the maximum yearly amount available to carry out the act from $2,500,000 to $10,000,000.

The new law also stipulates that a vessel built with the subsidy "will be of advance design, which will enable it to operate in expanded areas, and be equipped with newly developed gear, and will not operate in a fishery, if such operation would cause economic hardship to efficient vessel operators already operating in the fishery. . ."

In the original law, it was stated that a vessel constructed with the subsidy must be built for a specific fishery, and must remain in that fishery "during its useful life," or the owner of the vessel was required to repay the amount of the subsidy. In the new act, that section has been modified, and a vessel may be transferred to a fishery other than that for which it was designed, if the Secretary of the Interior "determines that such transfer would not cause economic hardship or injury to efficient vessel operators already operating in that fishery."

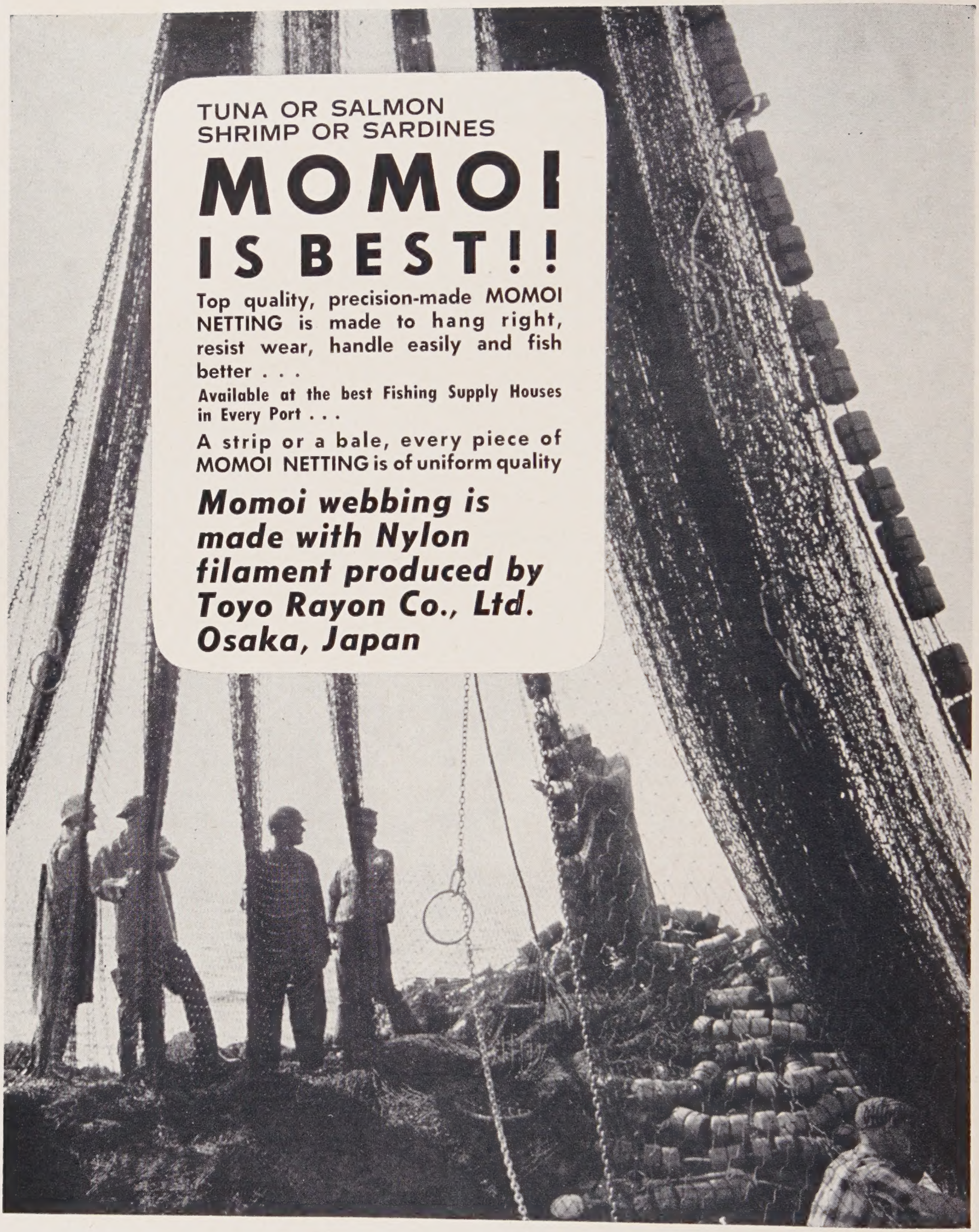
In both acts, the term "fishing vessel" means any vessel designed to be used in catching fish, processing or transporting fish loaded on the high seas, or any vessel outfitted for such activity.

It is interesting to note that the first section of the bill has been changed from "in order to assist certain depressed segments of the fishing industry . . ." to "in order to correct inequities in the construction of fishing vessels in the United States. . ." Presumably this will make the benefits of the bill available to sections of the country other than those in which the industry is "sick".

Miller New Commissioner Canadian Section INPFC

Donovan Miller, director and executive assistant, Canadian Fishing Co., Ltd., Vancouver, B. C., has been appointed Canadian commissioner to the International North Pacific Fisheries Commission. He succeeds John M. Buchanan, who recently retired as chairman of the board and president, B. C. Packers, and who has been a Canadian member of the INPFC since its inception in 1953.

The other Canadian commissioners are Dr. A. W. H. Needler, Canada's deputy minister of fisheries; Carl E. Giske, Prince Rupert; and James Cameron.



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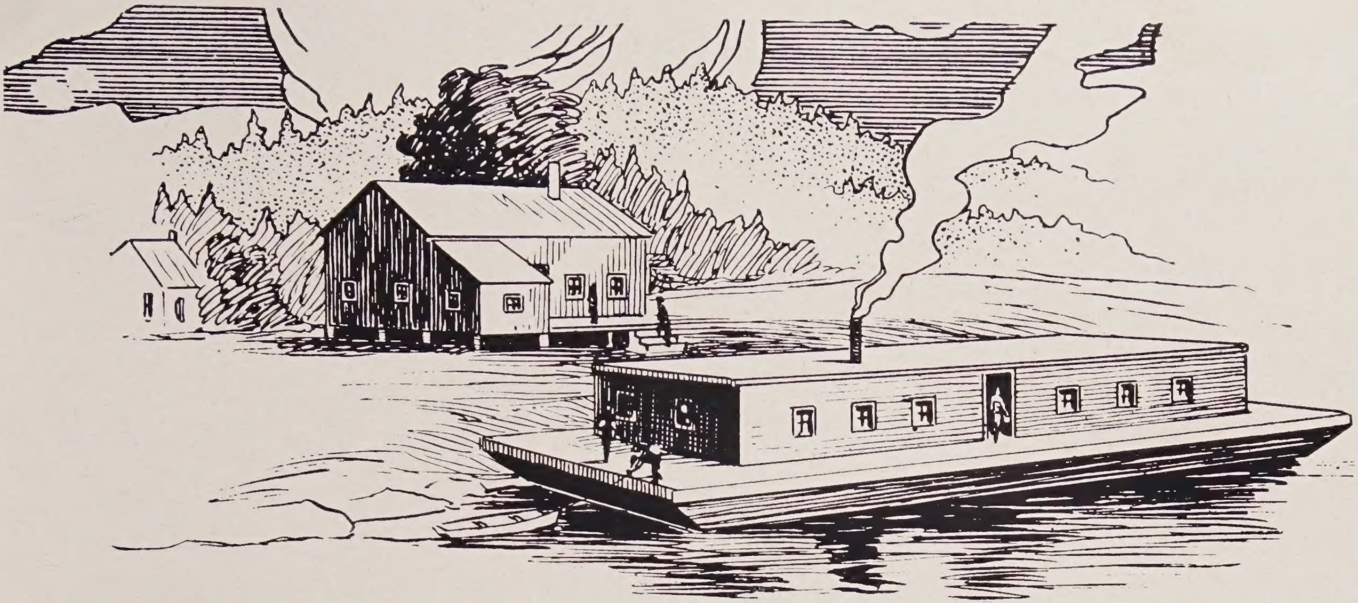


Only known picture of the first salmon cannery operated by the Hume Brothers and Andrew Hapgood at Washington, on the Sacramento River, Calif. This picture was drawn in 1903 at the order of Miller Freeman for the January, 1904, issue of **Pacific Fisherman.** The unknown artist worked under the direction of R. D. Hume, who worked in the cannery after it was established by his uncles in 1864.

ONE HUNDRED YEARS—
Of Growth in Salmon Canning

- Salmon canning began 100 years ago, in 1864.

Beginning of one of the world's greatest fishery enterprises was on the Sacramento River in California, but almost immediately the growth of the industry ran north and west far beyond California, bound for its eventual character as an international industry, as it is today.

In these pages of an issue dedicated to observance of the Centennial of Salmon Canning, *Pacific Fisherman* will look thoughtfully at the first 100 years of a romantic international industry—an industry which need not die although it depends upon wild things, born in mountain streams, and living in the endless pastures of the sea, beyond the sight and ken and counting of men.

- The Pacific salmon industry is harvesting its fish today to a degree not matched before; with an intensity sharpened by competition, but the light of science shows us we are not necessarily depleting the resource, for we know so very much more about it than we did only a decade ago when salmon canning was 90 years old.

One has but to read Dr. William F. Royce's article in this issue to know that modern knowledge of the salmon assures other centuries, reaching into the future, *if*—

If Man has the intelligence and ability to control himself. Danger to salmon through the first 100 years has always been rooted in Man's greed and unwillingness to recognize that, *properly used,* the resource can be perpetuated.

Now Man knows how he may, and that he *must,* fish wisely and with individual and international restraint and honesty. At the same time, as Dr. Royce shows, Man must be willing to spend freely to find the facts, *the ever-varying facts.* If soundly sought and intelligently applied these facts can show where to fish, how much to take, and when, in order to maintain this magnificent resource at full tide.

It is not enough for men to understand the fish and how to catch them and control them wisely. Those who fish also must come to understand themselves, and the men of countries other than their own. They must come to comprehend that control of exploitation and greed is vital, and that conservation of this resource calls for *self-control,* by individuals, and by nations composed of individuals.

Thus as salmon canning enters its second century the problem is not how to catch salmon and can it, but how to harvest the resource without impairing it, that salmon may continue to serve Mankind for centuries beyond today's horizon.

- This issue is not an historical review, year by year of a century. Nor is it a study of the "bad old days" when salmon was a primitive industry and the resource was rated "inexhaustible". Those days are part of the story, surely; and we can learn from them, but they were only the beginning.

In these pages we shall seek the significant steps by which salmon canning has grown for its first 100 years—

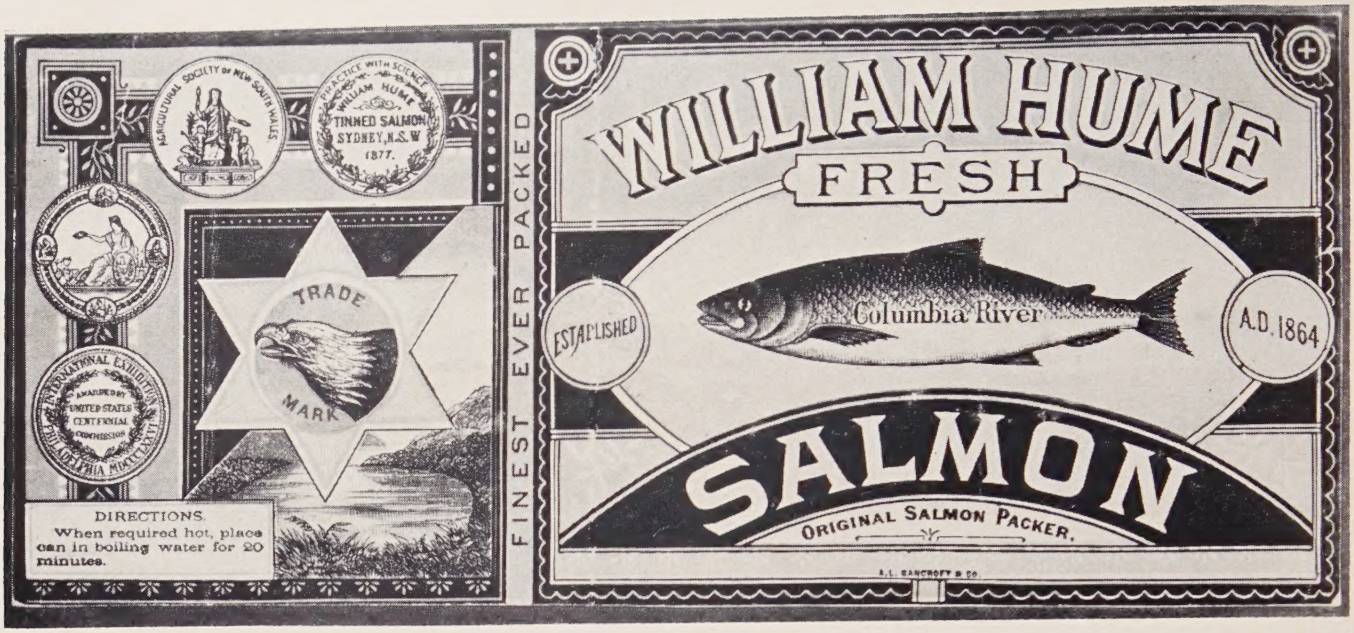
It has been an exciting century, but the future is more so.

Beginnings on the Sacramento

- Even before three men from the State of Maine started salmon canning on the Sacramento in 1864, there was a salmon industry based on salt on the Columbia River. Through the 1840s there were sporadic efforts to utilize the salmon for trade, but it appears that the first commercial success was that of John West, who began salting salmon at Westport, Ore., in 1857. His name lives today in the leading salmon label in the United Kingdom.

But salmon *canning* as such began in 1864.

William Hume emigrated to California in 1852 from Maine, bringing with him a gillnet with which he had fished on the Kennebec River. He came of a line of Scottish salmon fishermen, and



William Hume's own label. He was head of the company which initiated salmon canning in 1864, as the label records, but the date of this original from the archives of **Pacific Fisherman** was lithographed after 1877, as the Australia medal testifies.

he made his living fishing on the Sacramento until 1856, when he returned to Maine and persuaded his brother, George W. Hume, to go to California with him. In 1863 George W. Hume returned to Maine and invited Andrew S. Hapgood, who had some experience in canning lobsters, to join the Humes in a salmon canning venture on the Sacramento at Washington, Yolo County.

There in 1864 the three started canning on a small barge—the first "floater".

All this is told interestingly and in some detail in an article by R. D. Hume — a nephew — which was published in *Pacific Fisherman* in January, 1904. The article remains to this day the basic document in the History of Salmon Canning. In arranging for it, Miller Freeman, founder and publisher of this journal, had an artist draw a sketch of the cannery in collaboration with R. D. Hume, who worked in the original plant. This sketch, here reproduced, is the only known picture of the first cannery.

Growth—North and West

● Salmon canning spread at a racing pace, with the Humes in the saddle. By 1866 William Hume established the second cannery—at Eagle Cliff on the Columbia River in Washington Territory. P. J. McGowan, grandfather of John S. McGowan, today president of Bumble Bee Seafoods, Inc., was fishing beach seines at Chinook in that year.

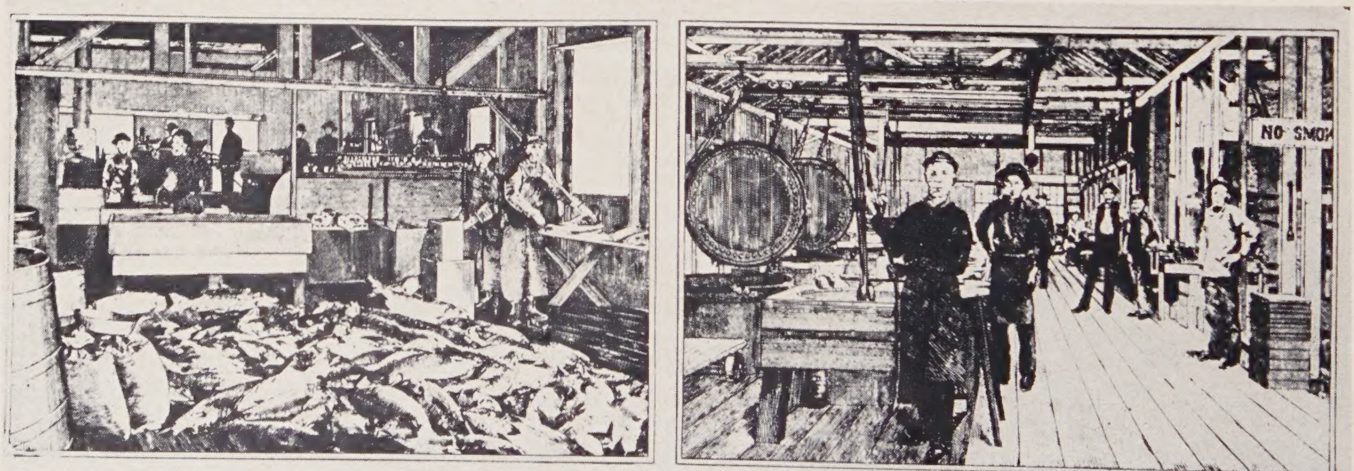
By 1881 there were 35 canneries active on the Columbia and their pack in that year was 549,115 full cases. The river reached its all-time peak pack in 1883, when it was 629,400 full cases, each worth $5—all hand-packed in handmade cans.

From the Columbia River salmon canning spread to the Fraser in 1870 with a cannery at Annieville, just below New Westminster.

First cannery on Puget Sound was established at Point Roberts, Wash., in 1893 by A. E. Wadhams of Portland.

Alaska, Canada & Coast

● It was in 1878 that the first salmon cannery was established in Alaska. Actually there were two, but precedence is usually given to the cannery built at Klawock in that year by North Pacific Trading & Packing Co., for this operation has been continuous virtually every year since. The other 1878 entry was the Cutting Packing



Antique wood cut sketches captioned in the archives of **Pacific Fisherman** as drawn in "one of the original canneries on the Columbia River. The vertical cooking vessels in the sketch on the right are referred to as "water bath cookers", placing the pictures before the days of pressure cooking with steam.

Co. at Sitka, but it operated only that year and the next.

The westward rush of canning stepped up sharply about 1888 and 1889 as expeditions followed fast to the Red salmon fisheries of Kodiak Island, with the result that the market was quickly glutted. By 1891 the first Kodiak consolidation came into being and the pack was put up in half the canneries. The first Alaska Packers Association was formed with five trustees who marketed the pack, and then disbanded.

Two years later the name was used again, this time in the incorporation of the great company which is still a leading factor in the industry.

Bristol Bay with its wealth of Red salmon drew attention early, the first cannery being built there in 1884. Surprisingly enough, the early development was all on the Nushagak, and it was not until 1895 that the first cannery was built on the Kvichak, with its greater potential . Several of the early plants actually were established as salteries and later converted to canning as the productivity of the location was proven.

Growth was rapid to Westward along the north coast of the Alaska Peninsula; and by 1912 the Midnight Sun Packing Co. built a cannery on Kotzebue Sound, above the Arctic Circle. Fifty years later, in 1962, the venturing floater *Bering Sea* went back to Kotzebue.

● Development of Canada's Pacific salmon resource centered on the Fraser River for a decade from its start in 1870, and then in a series of leaps, notably in 1881, bounded up the coast to establish canneries in all the areas where Sockeye were to be had in volume. The Skeena had a cannery by 1877, Rivers Inlet and Naas River by 1881, the year of the great expansion.

● A strange faith in the abundance of salmon, and in the ability of late comers, saw establishment of canneries in almost every opening in the coastline of Oregon and Washington, with canneries by the dozen at such unlikely points as the Soleduk, Hoh, Queets, Washington; and Necanicum, Nehalem, Nestucca, Siletz, Yaquina, Alsea, Siuslaw, Coquille, Oregon; and Sixes, Klamath, and Noyo Rivers, California.

None of these canneries today are active. Development of highway transport along the coast led to concentration of the fish at the larger centers, while later the legislative efforts of sport fishermen closed most of the small coastal rivers to commercial fishing, which was forced off-shore, with trollers fishing outside state waters.

Japanese schooners in Alaska waters under watch of the "revenue" cutters **Manning** and **Perry** off St. George Island, Bering Sea, in July, 1907. The schooners were the **Kaisu Maru** and the **Nitto Maru.**

Express Brand wooden cases filled with cans going aboard one of the cannery ships in the days of sail, evidently after the introduction of "sanitary cans" about 1912. Note the fuel supply, lump coal, on the dock for loading.

Star of Poland, a steel bark, member of the great "Star Fleet" of the Alaska Packers Association, loading for Alaska, perhaps at the dock at Semiahmoo.

The "Sanitary Can" is born. The scene was the Sanborn-Cutting cannery at Astoria. The year 1912; and in the picture, seated in the foreground rows are, from the left: W. F. McGregor, George W. Sanborn, Fred Barker, F. P. Kendall, H. S. McGowan, George Foster, R. A. Welsh, H. W. Phelps, Lee H. Wakefield, H. Bell-Irving Sr., Bernard Lindenberger, Daniel Campbell, C. H. McGowan, Herbert Hume, F. C. Barnes, Miller Freeman, E. E. Fleming, W. J. Crawford, W. H. Barker, P. J. Andrae, K. J. Saeter, J. G. Cotton. Standees, with the front man named first where two are in line, are: F. W. Prael, August Buschmann, F. A. Seufert, E. A. Sims, John McGowan, F. C. Johnstone, H. Bell-Irving Jr., J. J. McBain, O. M. Ash, John L. Myers, E. Larsen, P. E. Harris, J. L. Smiley, D. W. Branch, John E. Rice, R. E. Small, F. M. Warren, William Stewart, C. H. Buschmann, W. E. Persell, E. Shelley Morgan, H. H. Snow, H. J. Bigger, Carl A. Sutter, D. C. Carpenter, J. Rowan, George Teal.

Asia

• Asian salmon canning apparently began in the period following the Russo-Japanese War, whose peace treaty of 1905 conferred greatly extended fishing privileges to the Japanese. There had, however, been one canning venture as early as 1900, preceded by a number of salmon salting and curing operations in Siberia for a number of years. By 1917 *Pacific Fisherman Yearbook* was able to announce that there were 17 canneries—both Japanese and Russian—active in Kamchatka in 1916, with a pack of 470,000 cases.

Number of salmon caught in Siberia in that year was reported as 94,582,000 fish, of which 85,400,000 were Pinks. Reds were counted as 3,619,000.

Following World War I and the Communist Revolution, increasing pressure was brought upon the Japanese operations, with progressive reduction by the Soviet in the fishing and canning sites available for lease to Japanese firms.

This growing opposition in Kamchatka led Japanese enterprisers to apply to salmon the technique which had been developed for canning King crabs in floating plants; venturing high seas fishing for salmon also.

Such operations proved spectacularly successful and the nets of the high seas gillnet fleet effectively "corked" the inshore fisheries of the Japanese and Russians alike. So intense did this competition become that the Japanese government intervened and ordered an accommodation which would spare the shore operators from destruction, while at the same time awarding corporate advantages to the high seas operators whose daring tactics had brought them victory.

• Now Japan was possessed of a high sea salmon fishing and canning fleet, of ocean gillnetters and factoryships—and of the know-how for applying these facilities far beyond the coastal waters of Kamchatka.

Where to go? The answer was obvious, and by the early Thirties Japanese "investigation" ships were probing along the Aleutian Chain where the Red salmon marshal for their spawning run to Bristol Bay, Earth's richest fishery.

Let us leave the national and geographical development of salmon canning here for a moment and examine the technological growth which accompanied it, and made it possible.

• Salmon are a seasonal resource, available in the fullness of size and perfection only for a short time as they reach the coast to resume their fresh water existence. Moreover, the fish are highly perishable. Combined, these two characteristics put a high premium on the ability to handle a year's salmon in a few months or weeks, sometimes in a few days.

Proliferation of canneries and widest geographical distribution of them proved an uneconomic answer, and it was soon apparent that solution lay rather in mechanization and the speed and capacity it would make possible.

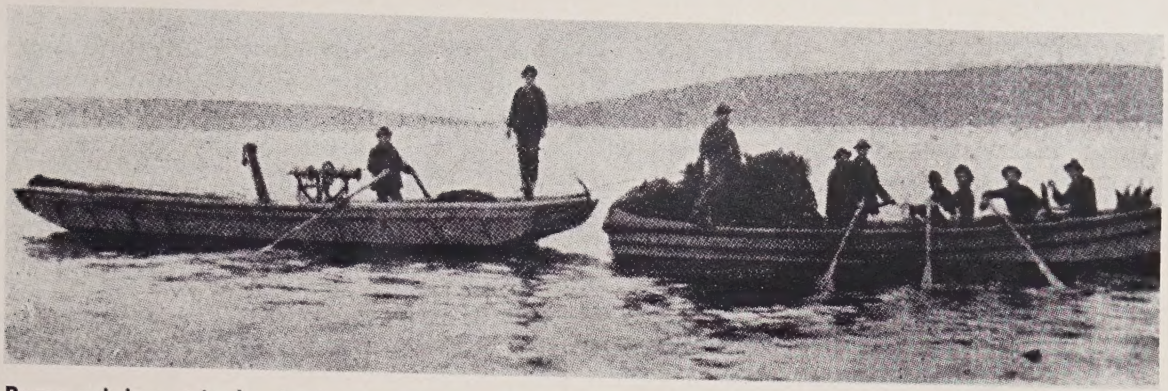
Can-making perhaps was the first long stride, followed by mechanical butchering through the Iron Chink—which 60 years have improved, but never replaced. Then came the early forms of fillers.

Second phase of mechanical improvement in salmon canning came with a rushing pace. The "sanitary" can was introduced in 1912; vacuum packing in the early Twenties; followed by high-speed multiple-spindle filling, can-weighing, and still higher speeds, eventually to steam-jet vacuum methods, and precision instruments. Sterilization continues to remain a batch process, challenging the inventor.

• Fishing has changed also, not so much in methods as in the means by which they have been employed.

Salmon for canning today are caught *basically* by two methods—gillnets and seines. True, some also are taken by hook-and-line—trolling and longlining; and by reef nets, but these are minor methods.

Gillnets and seines were among Man's earliest methods of fishing, following fast behind the spear and weir. They have been improved, yes; and particularly in the last decade or two by synthetic fibers, but basically the methods are unchanged from those employed when Christ sought His dis-



Purse seining at its beginning on Puget Sound in which the net was set from a skiff rowed by six oarsmen and pursed by means of a hand winch on a small scow handled with one pair of oars.

Gillnetting 70 Years Ago—in the Columbia River off Astoria in the spring of 1894. Basically there has been little change, save in the source of power, and gillnetting is still the most widely used fishing method in the world, as it has been since the time of Christ and his Galilean fishermen-disciples.

ciples by Galilee, and the Picts and Scots caught salmon on the Tay and Dee.

Two of the most efficient forms of salmon fishing — traps and wheels — have been eliminated by law and the processes of democratic government. Merits of this gear, the rationale for its use, its effect on the resource, and the reasons for its extermination, will long be debated. *Pacific Fisherman* believes, and here ventures once more to declare, that traps and wheels had one fatal fault which led to their elimination. *They presupposed an exclusive right of fishery at a preferred location.*

- Beside the enormous contribution of synthetic fibers to efficiency in modern gillnet and purse seine gear, motorization of vessels and the application of power to the handling of the gear itself have made today's fishing highly efficient. The hydraulic power block has been responsible for much of the modern advance in seining, and it finds application in gillnetting also.

Mounting efficiency of salmon gear, increasing quantities fished, and the Japanese policy of fishing on immature stocks on the high seas, combine to make it evident that the future of salmon canning lies in improved management of the resource and the industry it sustains, rather than improved harvesting and manufacturing methods.

- The honest man with some knowledge of the Pacific salmon fisheries in its first 100 years of canning will readily admit that the early decades were marked by shameless waste and ruthless greed.

Further, early efforts at control were largely ineffective, placing blind and vain faith in hatcheries, and in the U. S. federal formula of 50-50 catch and escapement in Alaska.

In less than two decades, beginning immediatley following World War II, salmon biology and salmon resource management based upon scientific knowledge have came a very long way indeed.

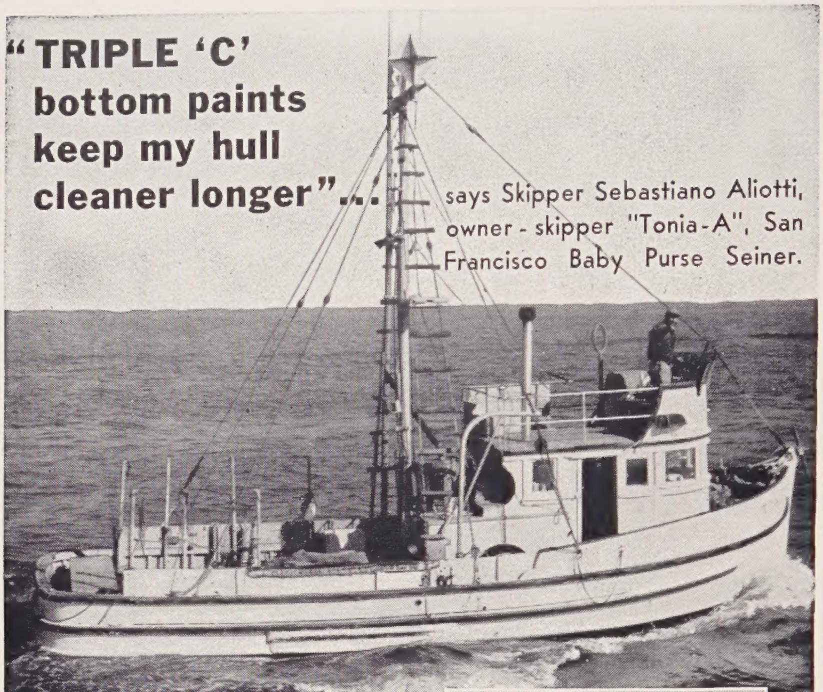
Much of this may be ascribed to the standards set and basic studies initiated by the Fisheries Research Institute of the University of Washington College of Fisheries. Conceived in 1946 by a group of forward-looking salmon canners, and wholly supported for years by the contributions of their companies, this Institute under the direction first of Dr. William F. Thompson and subsequently of Dr. William F. Royce, has exerted profound influence. This has extended far beyond Alaska, where the work has largely been conducted, and indeed has reached into all salmon-producing regions of the world.

The significant success of the International Pacific Salmon Fisheries Commission, through which Canada and the United States control and develop the Sockeye and Pink salmon fisheries of the Fraser River system and their boundary waters, also directed in its beginnings by Dr. William F. Thompson, has shown how science, engineering, capital investment, far-sighted administration and an intelligent and enlightened fishing industry can reverse decline and in some cases at least actually improve upon conditions existing before Man's exploitation of a salmon fishery began.

- The last 10 years of salmon canning's first century have in many respects been the most dramatic; and surely from them comes the best light reflected into the future.

In the beginning of this brief review of 100 years of salmon canning we said this was an international industry, and such it is. Almost from the first salmon canning in 1864, the product has moved in international trade, notably to the United Kingdom.

First the United States, then Canada, Japan and Russia, all have participated in this trade, as producers and exporters; and latterly as competitors


"TRIPLE 'C' bottom paints keep my hull cleaner longer"...
says Skipper Sebastiano Aliotti, owner - skipper "Tonia-A", San Francisco Baby Purse Seiner.

Skipper Sebastiano Aliotti

"Forty-two years a fisherman," says Skipper Aliotti, "and in all my experience as fisherman, skipper and boat owner, my favorite is American Marine paint, not only Triple 'C' for bottom paint, but the full line for all of my "Tonia-A's" paint work. It's the best."

Skipper Aliotti operates his 33-foot baby purse seiner out of famous Fisherman's Wharf, San Francisco, year in and year out, following the trends up and down the California coast for market fish. Last time in drydock, "Tonia-A" needed only a little touch-up work. Skipper Aliotti finds Triple 'C' best for long service.

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also on the high seas as well as on Eastcheap and Hudson Street.

- Not far back we left-off tracing salmon canning's geographical expansion with the Japanese probing into east Bering Sea at the gateway to Bristol Bay in the years before World War II. Firm American protest and the Cordell Hull doctrine that the United States had a special and unmistakable interest in salmon spawned in Alaska's streams led to the withdrawal of the Japanese vessels.

Treaty of San Francisco brought peace following World War II, and was itself followed in 1951 by the International North Pacific Fisheries Convention between the United States, Canada and Japan. Ratified in 1953, it entered into force in 1954—10 years ago.

The North Pacific Treaty is unique in its principle that (a) historic utilization of an ocean fishery, (b) maintenance of scientific study of the fishery to determine its fully productivity, (c) administration in keeping with scientific findings to sustain that productivity, and (d) exploitation by its historic users at the maximum level which can be sustained from year to year—

Creates a special interest in the fishery on the part of historic users which should be respected by other nations.

- The nations signatory to this treaty have fished under it for a decade, and have carried out faithfully the obligation of scientific study of the salmon resource on the high seas.

They know more today—and all the world knows more—as result of those 10 years of study than was learned of the marine life of the salmon in the 90 years which went before.

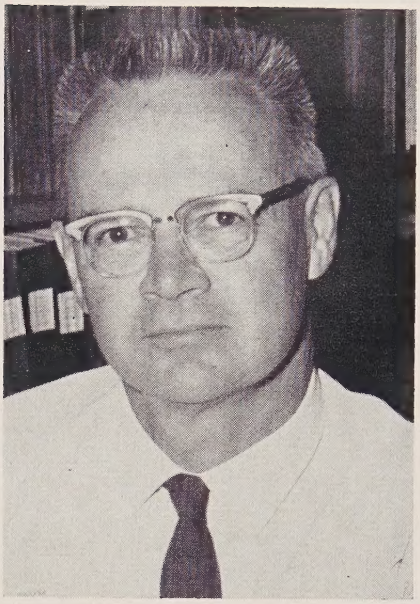
Now, in 1964, the Centennial Year of Salmon Canning, the three nations party to the treaty are seeking means by which it may be improved and made more than ever an instrument for the wise use of this resource.

Now, today, as this issue of *Pacific Fisherman* reached its readers, representatives of the three nations are meeting in Ottawa, conferring to this end in the third such conference. There they consult as salmon canning moves into its second 100 years. From this meeting, or others which may follow it, must come the future of an industry spread across the North Pacific, in which Asians and North Americans alike engage and compete.

The very fact that three of these world powers, these competitors, can and will consult on the conservation of the salmon in the sea is perhaps the brighest portent for the future of a resource which, wisely used, sows itself and serve Mankind forever.

Prospects for Alaska Salmon

By WM. F. ROYCE



Let Me be an Optimist

• Alaska has most of North America's salmon resource, and most of the salmon problems.

Alaska now produces about 3 times as much salmon as British Columbia, and about 5 times as much salmon as the other Pacific Coast states. Yet Alaska now produces only about half as much salmon as in the 1920 and 1930 decades. Almost all of the runs have declined in production and one of the major runs—Southeast Alaska Pink salmon — has declined to only one-fifth of its former sustained production level.

Many Alaskans are pessimistic about the future of the salmon. and about the possibilities of protecting the resource from foreign fishermen. George Rogers, in his book about the future of Alaska did not even consider the possibility of expanding salmon production.

• Let me be an optimist.

I believe the United States will be successful in protecting salmon of Alaska origin from foreign fishermen; and I believe that it is technically possible and economically practical to double the production of Alaska salmon. I believe it is within our means to restore Alaska salmon production at least to the sustained level of 30 years ago. After all, there have been no significant physical changes in Alaska salmon streams and lakes.

1. *What does doubling production mean?* Doubling Alaska salmon production means an additional 3,000,000 cases of salmon worth about $75,000,000, a major addition to the product of Alaska, a substantial source of income and a broadened base for taxes. In another sense, it means catching approximately 50,000,000 more adult salmon, and allowing about 20,000,000 more adult salmon to spawn.

2. *How can production be doubled?* This can be stated very simply, but it is enormously difficult in the practice. It is merely this: that we must regulate the runs precisely. We must protect the weak runs and harvest the surplus from the big ones. Some weak runs require total protection while the big runs can be harvested at a rate of 85 to 90 per cent. A *uniform* catch rate such as the 50 per cent rate formerly imposed by the federal government is now recognized as nonsense.

3. *Aren't Alaska salmon runs being regulated precisely?* The answer to this question is a flat NO, despite the efforts of a dedicated group of able men in the Alaska Department of Fish & Game.

For example, in 1963 in Bristol Bay the overall run was miserably poor because the big Kvichak run was at the bottom of its cycle. This Kvichak run is the most important in North America, and in its good years can produce $50,000,000 worth of canned salmon. The recent escapements have varied from 250,000 to 15,000,000. Our best estimate is that the peak escapement should be 6,000,000, with intervening escapements of about 2,000,000 to 4,000,000 to make full use of the rearing capacity of the lakes. Only 3 out of 9 recent Kvichak escapements have been in this ideal range; the balance either wastefully large or too small. We are finding that too large escapements are especially wasteful. More of the adults die before spawning or dig out each others spawn. If the eggs hatch, the overabundant young will grow more slowly and die in greater numbers in the lakes. The smaller, less vigorous young which do go to sea have less chance of surviving, and tend to return as adults a year later than they would if they had the opportunity of being well reared.

• On the other hand, in the Icy Strait area of southeast Alaska in 1963 there was a near-record *catch* of Pink salmon, but no one knows how many Pink salmon entered Icy Strait, or the number of each race which was present. We had no forecast of this big run. We do not know why it happened. This run was a fortunate accident—not a planned production. *It probably went under-harvested.*

It is an unfortunate fact that no one knows the size of any significant returning Pink salmon runs to Alaska. Of course we know the catch, but it is impossible to associate this catch with specific numbers of fish spawning in specific streams. Nor does anyone know the size of the Chum salmon

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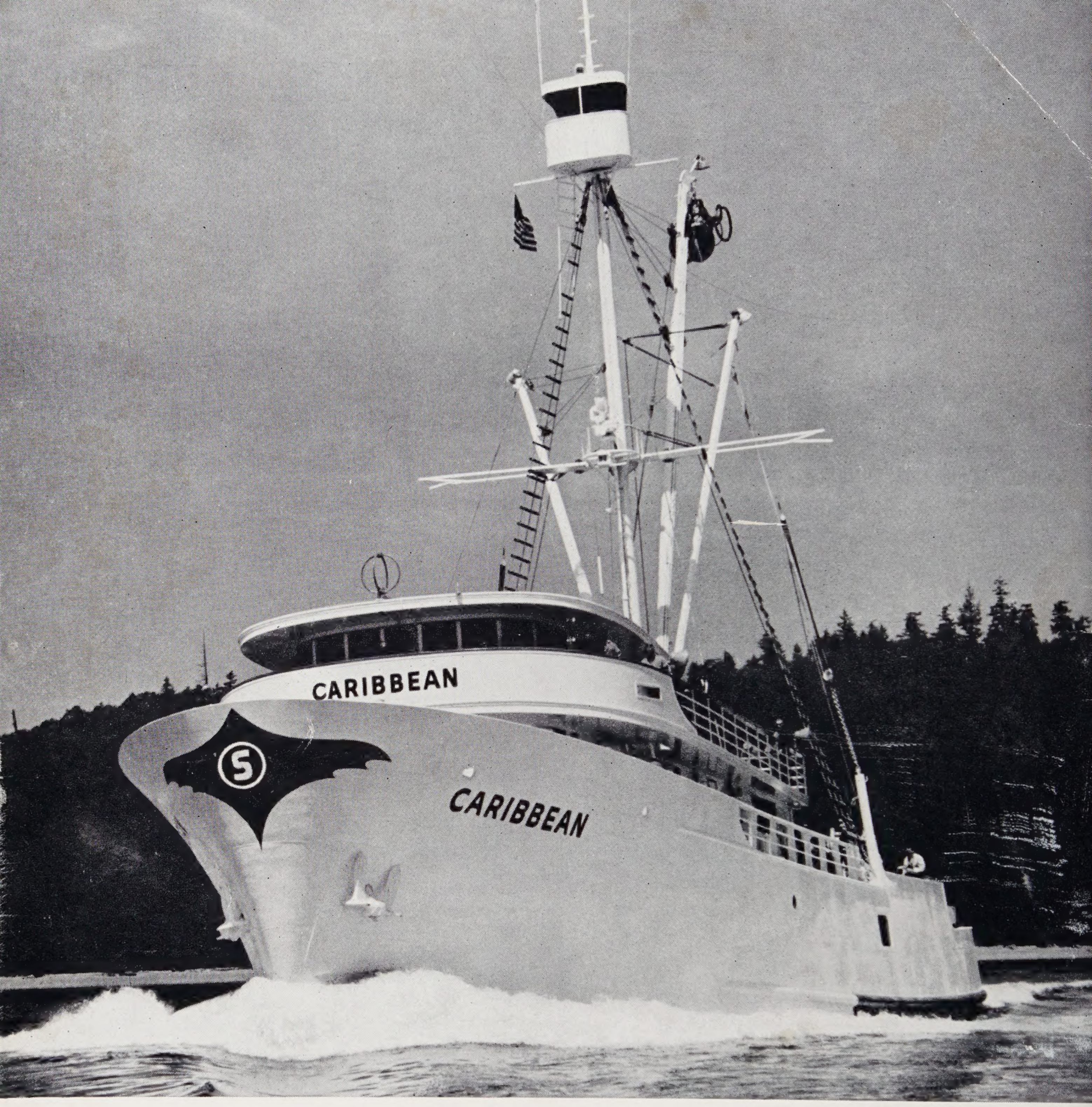
Dr. William F. Royce, director of the Fisheries Research Institute of the University of Washington College of Fisheries, is author of accompanying article, which is based on a recent address delivered to Alaska businessmen.



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